



Ortho rehab audit at Kauvery Hospital, Trichy

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1. Introduction

Do Ortho patients need rehabilitation?

Fragile patients have multiple medical co-morbidities and deteriorating health conditions, which may lead to falls and fractures. It may not be safe to send them home early; rehabilitation processes would help the patient and relatives by facilitating a smoother transition.

Goals of rehabilitation

1. To improve balance and reduce repeated falls
2. To improve the function of the patient
3. To have a satisfactory experience

Existing Ortho Rehabilitation methods

1. Santé Service Bayonne: a French approach to home care, for the elderly, the physically handicapped, and the terminally ill, 1977
2. Peterborough Hospital home care program since 1978
3. Nursing homes, rehabilitation centres, residential care homes, home care by the relatives

Available rehabilitation support to our ortho patients

1. Nurse visit at home
2. Physiotherapist visit
3. Domiciliary help
4. Physio and the domestic helper
5. Carer Support to the family, often by relatives, neighbours, and well wishers

HAMSA Rehabilitation Centre

HAMSA came as a rehab facility next door, primarily a neuro rehab, started in November 2022. It offers nursing support and has a medical officer in the daytime and emergency cover from the main hospital. Physiotherapist and occupational therapist support was given, and home visits were also arranged. Our Orthopaedic Department started sending patients to HAMSA as a step-down care from March 2023.

2. Materials

Patients referred by the orthopaedic team following the acute care. Ortho continuum care by the team members whilst in HAMSA and discharge planning made by a multidisciplinary approach with input from the Ortho team.

A total of 175 patients have been admitted to HAMSA for rehabilitation, since its opening in 2022

- 1) A total of 25 Orthopaedic patients were admitted at HAMSA (14%)

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- 2) Only the 25 orthopaedic patients were audited, and all other patients excluded
- 3) Most of them had treatment for fragility fractures (18/25) 72%
- 4) 16 patients with proximal femur fractures,
- 5) One each with pelvic fracture and acetabulum fracture
- 6) Two patients had a second fragility fracture.

Comorbidity

In 25 patients, 11 patients have at least two co morbidities

Comorbidity	No. of patients
Fragility fracture	18
Diabetes	12
Hypertension	9
CAD or heart failure	6
Respiratory illness	3
Previous fragility fracture	2
No comorbidities (96 and 97 year old)	2

Surgery Patients

within 24 hr	within 48 hr	within 72 hr	within 96 hr	not have surgery
2	7	14	17	1

Duration of stay in the main hospital (KCN) after surgery

- 1) Duration of stay at HAMSA
- 2) Readmissions back to KCN
- 3) Subjective measure of Rehabilitation at HAMSA
- 4) Objective measure of Rehabilitation at HAMSA

Quantification of rehabilitation

- 1) Subjective measure: Feedback
- 2) Objective measure: Functional independence score
- 3) Objective measure: Berg Balance Scale

3. Results

Duration of stay at KCN after surgery

- 1) One patient stayed for 2 days
- 2) Two patients stayed for 3 days
- 3) Three patients stayed for 4 days
- 4) Four patients stayed for 5 days
- 5) Two patients stayed for 6 days
- 6) One patient stayed for 7 days
- 7) One patient stayed for 11 days

Duration of HAMSA Stay

Four days to 43 days

Readmissions

- 1) Two patients were readmitted from HAMSA to KCN
- 2) Hyponatremia and pressure sore management
- 3) No Orthopaedic related readmissions
- 4) One patient discharged from HAMSA, readmitted with DVT

- 5) One patient discharged home from KCN, admitted to HAMSA for rehab

Feedback

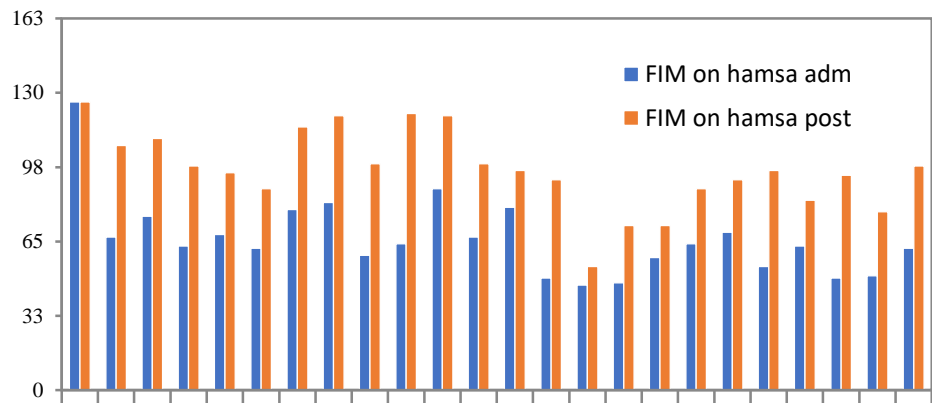
S#	Particulars	Overall Points	Rating	Patient Satisfaction %
1	Overall experience	4.70	★★★★★	94%
2	Admission Experience	4.67	★★★★★	93%
3	In-House Experience	4.76	★★★★★	95%
4	Therapist & Service	3.94	★★★☆☆	79%
5	Nursing Experience	4.61	★★★★★	92%
6	Doctors Experience	4.73	★★★★★	95%

Functional Independence Measure - FIM

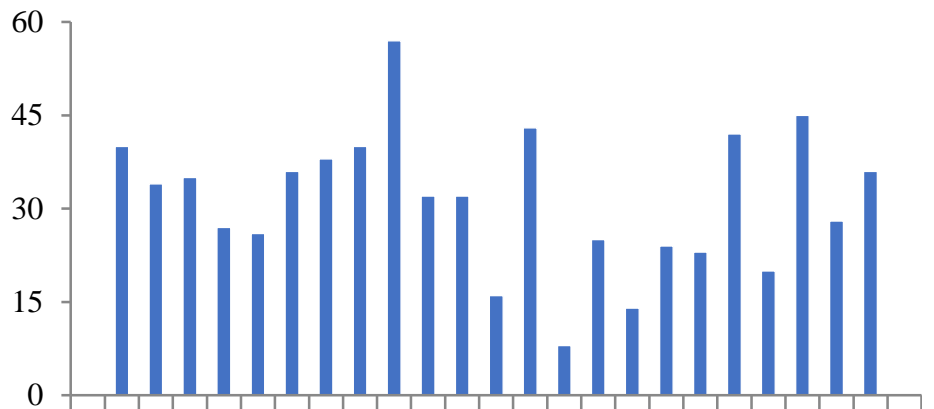
A total of 126 points (18x7)

	ADMISSION*		DISCHARGE*		GOAL
SELF-CARE					
A. Eating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Grooming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Bathing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Dressing – Upper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Dressing – Lower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Toileting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SPHINCTER CONTROL					
G. Bladder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Bowel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TRANSFERS					
I. Bed, Chair, Wheelchair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
J. Toilet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
K. Tub, Shower	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LOCOMOTION					
L. Walk/Wheelchair	<input type="checkbox"/>	<input type="checkbox"/>	W-Walk C-Wheelchair B-Both	<input type="checkbox"/>	<input type="checkbox"/>
M. Stairs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMUNICATION					
N. Comprehension	<input type="checkbox"/>	<input type="checkbox"/>	A-Auditory V-Visual B-Both	<input type="checkbox"/>	<input type="checkbox"/>
O. Expression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SOCIAL COGNITION					
P. Social Interaction	<input type="checkbox"/>	<input type="checkbox"/>	V-Vocal N-Nonvocal B-Both	<input type="checkbox"/>	<input type="checkbox"/>
Q. Problem Solving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
R. Memory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Pre and Post FIM



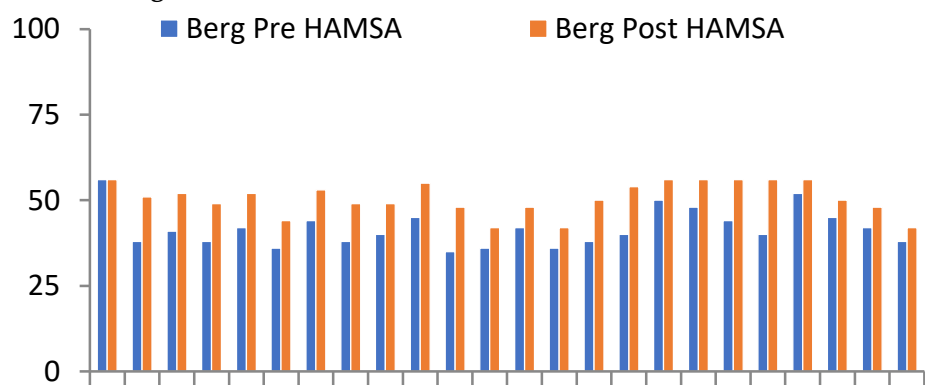
Improvement in FIM



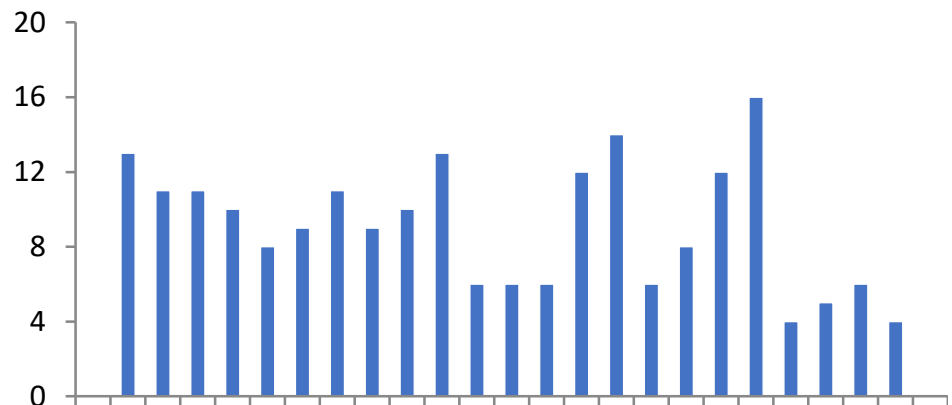
Berg Balance Scale

A total of 56 points (14x4)

Pre and Post Berg



Improvement in Berg



Summary

HAMSA has provided good service to elderly orthopaedic patients with fragility score. The functional improvement and improvement in the balance to prevent falls has been demonstrated.

Scope for further study and audit

1. Hospital at home instead of HAMSA for selected patients: Peterborough model
2. Reducing the stay at HAMSA
3. Medical problems encountered whilst at HAMSA
4. Readmissions to the main hospital (2 patients 8% were readmitted)
5. Sustainability of the improvement subsequent to discharge from HAMSA.

Acknowledgement

Ortho team members, HAMSA and KCN Nurses and secretary and the database.